



PTO/SB/08A (04-03)

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INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

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## Complete if Known

Application Number	10/656,802
Filing Date	September 4, 2003
First Named Inventor	Erik Scher
Group Art Unit	1753
Examiner Name	Unassigned Diamond
Attorney Docket Number	40-001320US
Date Submitted	January 26, 2004

## U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code (if known)			
ADD	1	5,505,928		Alivisatos et al.	04-19-1996	—
ADD	2	5,690,807		Clark Jr. et al.	11-27-1997	—
ADD	3	5,751,018		Alivisatos et al.	05-12-1998	—
ADD	4	5,897,945		Lieber et al.	04-27-1999	—
ADD	5	5,990,479		Weiss et al	11-23-1999	—
ADD	6	5,997,832		Lieber et al.	12-07-1999	—
ADD	7	6,036,774		Lieber et al	03-14-2000	—
ADD	8	6,048,616		Gallagher et al.	04-11-2000	—
ADD	9	6,136,156		El-Shall, et al.	10-24-2000	—
ADD	10	6,225,198		Alivisatos et al.	05-01-2001	—
ADD	11	6,239,355		Salafsky	05-29-2001	—
ADD	12	6,245,988		Gratzel et al.	06-12-2001	—
ADD	13	6,306,736		Alivisatos et al.	10-23-2001	—
ADD	14	6,413,489		Ying et al.	07-02-2002	—
ADD	15	20020071952		Bawendi et al.	06-13-2002	—
ADD	16	2002/0130311		Lieber et al.	09-19-2002	—
ADD	17	2002/0172820		Majumdar et al.	11-21-2002	—
ADD	18	10/405,914		Empedocles, et al.	04-01-2003	—

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		Office	Number	Kind Code (if known)				
ADD	19	WO	94/04497	AI	Ecole Polytechnique Federale de Lausanne (EPFL)	03-03-1994	—	—
ADD	20	WO	95/29924	AI	Ecole EPFL	11-09-1995	—	—

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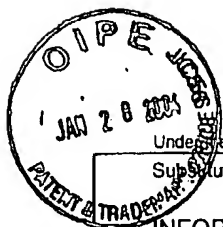
					Polytechnique Federale de Lausanne (EPFL)			
ADD	21	WO	02/17362	A2	President and Fellows of Harvard College	02-28-2002	—	—
ADD	22	WO	02/080280	A1	The Regents of the University of California	10-10-2002	—	—
ADD	23	WO	03/085700	A2	Nanosys, Inc.	10-16-2003	—	—

## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
ADD	24	Bjork et al. (2002) "One-dimensional steeplechase for electrons realized" <u>Nano Letters</u> 2, 86-90	—
ADD	25	Cao et al. (2000) "Growth and properties of semiconductor core/shell nanocrystals with InAs cores" <u>J. Am. Chem. Soc.</u> 122, 9692-9702	—
ADD	26	Cui et al. (2000) "Doping and electrical transport in silicon nanowires" <u>J. Phys. Chem. B</u> 104, 5213-5216	—
ADD	27	Cui et al. (2001) "Diameter-controlled synthesis of single-crystal silicon nanowires" <u>Appl. Phys. Lett.</u> 78, 2214-2216;	—
ADD	28	Dabbousi et al. (1997) "(CdSe)ZnS core-shell quantum dots: Synthesis and characterization of a size series of highly luminescent nanocrystallites" <u>J. Phys. Chem. B</u> 101, 9463-9475	—
ADD	29	Duan et al. (2000) "General synthesis of compound semiconductor nanowires" <u>Adv. Mater.</u> 12, 298-302	—
ADD	30	Greenham et al., (1996) "Charge separation and transport in conjugated-polymer/semiconductor-nanocrystal composites studied by photoluminescence quenching and photoconductivity" <u>Phys. Rev. B</u> 54(24):17628-17637.	—
ADD	31	Gudiksen et al (2000) "Diameter-selective synthesis of semiconductor nanowires" <u>J. Am. Chem. Soc.</u> 122, 8801-8802	—
ADD	32	Gudiksen et al. (2001) "Synthetic control of the diameter and length of single crystal semiconductor nanowires" <u>J. Phys. Chem. B</u> 105,4062-4064	—
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Supplemental form 1449A-B/PTO

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ADD	34	Huynh, et al., (1999) "CdSe Nanocrystal Rods/Poly(3-hexylthiophene) Composite Photovoltaic Devices" <u>Adv. Materials</u> 11(11):923-927.	—
ADD	35	Huynh, et al., (2002) "Hybrid Nanorod-Polymer Solar Cells" <u>Science</u> 295(5564):2426-2427	—
ADD	36	Jun et al. (2001) "Controlled synthesis of multi-armed CdS nanorod architectures using monosurfactant system" <u>J. Am. Chem. Soc.</u> 123, 5150-5151	—
ADD	37	Liu et al. (2001) "Sol-Gel Synthesis of Free-Standing Ferroelectric Lead Zirconate Titanate Nanoparticles" <u>J. Am. Chem. Soc.</u> 123, 4344	—
ADD	38	Manna et al. (2000) "Synthesis of Soluble and Processable Rod-, Arrow-, Teardrop-, and Tetrapod-Shaped CdSe Nanocrystals" <u>J. Am. Chem. Soc.</u> 122, 12700-12706	—
ADD	39	Manna et al. (2002) "Epitaxial growth and photochemical annealing of graded CdS/ZnS shells on colloidal CdSe nanorods" <u>J. Am. Chem. Soc.</u> 124, 7136-7145	—
ADD	40	Morales et al. (1998) "A laser ablation method for the synthesis of crystalline semiconductor nanowires" <u>Science</u> 279, 208-211	—
ADD	41	Peng et al. (1997) "Epitaxial growth of highly luminescent CdSe/CdS core/shell nanocrystals with photostability and electronic accessibility" <u>J. Am. Chem. Soc.</u> 119, 7019-7029	—
ADD	42	Peng et al. (2000) "Shape control of CdSe nanocrystals" <u>Nature</u> 404, 59-61	—
ADD	43	Puntes et al. (2001) "Colloidal nanocrystal shape and size control: The case of cobalt" <u>Science</u> 291, 2115-2117	—
ADD	44	Urban et al. (2002) "Synthesis of single-crystalline perovskite nanowires composed of barium titanate and strontium titanate" <u>J. Am. Chem. Soc.</u> , 124, 1186	—
ADD	45	Wu et al. (2002) "Block-by-block growth of single-crystalline Si/SiGe superlattice nanowires" <u>Nano Letters</u> 2, 83-86	—
ADD	46	Yun et al. (2002) "Ferroelectric Properties of Individual Barium Titanate Nanowires Investigated by Scanned Probe Microscopy" <u>Nanoletters</u> 2, 447.	—

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Date Submitted	March 16, 2004

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		Number	Kind Code (if known)			
ADD	01	2001/0046244	A1	Klimov et al.	11-29-2001	—
ADD	02	2003/0142944	A1	Sundar et al.	07-31-2003	—
ADD	03	2003/0226498	A1	Alivisatos et al.	12-11-2003	—
ADD	04	5,260,957		Hakimi et al.	11-09-1993	—
ADD	05	5,293,050		Chapple-Sokol et al.	03-08-1994	—
ADD	06	5,354,707		Chapple-Sokol et al.	10-11-1994	—
ADD	07	5,422,489		Bhargava	06-06-1995	—
ADD	08	5,585,640		Huston et al.	12-17-1996	—
ADD	09	5,613,140		Taira	03-18-1997	—
ADD	10	6,322,901	B1	Bawendi et al.	11-27-2001	—
ADD	11	6,501,091	B1	Bawendi et al.	12-31-2002	—

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		Office	Number	Kind Code (if known)				
ADD	12	WO	96/10282	A1	Burt	04-04-1996	—	—
ADD	13	WO	03/084292	A1	Massachusetts Institute of Technology	10-09-2003	—	—

## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
ADD	14	Alivisatos (1996) "Perspectives on the Physical Chemistry of Semiconductor NanoCrystals." J. Phys. Chem. 100:13226-13239.	—
ADD	15	Alivisatos (2000) "Naturally Aligned Nanocrystals" Science, 289:736	—
ADD	16	Colvin et al. (1994) "Light Emitting Diodes Made from Cadmium Selenide Nanocrystals and a Semiconducting Polymer. Nature 370:354-357.	—

Examiner Signature	<i>alivisatos</i>	Date Considered	7/2/04
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	First Named Inventor	Erik Scher
	Group Art Unit	1753
	Examiner Name	Unassigned Diamond
	Attorney Docket Number	40-001320US
Date Submitted	March 16, 2004	

ADD	17	<b>Dabbousi et al. (1995)</b> "Electroluminescence from CdSe quantum-dot/polymer composites." Appl. Phys. Lett. 66(11):1316-1318.	-
ADD	18	<b>Danek et al. (1996)</b> "Synthesis of Luminescent Thin-Film CdSe/ZnSe Quantum Dot Composites Using CdSe Quantum Dots Passivated with an Overlayer of ZnSe." Chem. Mater. 8(1):173-180.	-
ADD	19	<b>Diehl (1997)</b> "Fraunhofer LUCOLEDs to replace lamps." III-Vs Rev. 10(1).	-
ADD	20	<b>Empedocles et al. (1996)</b> "Photoluminescence Spectroscopy of Single CdSe Nanocrystallite Quantum Dots." Phys. Rev. Lett. 77(18):3873-3876.	-
ADD	21	<b>Empedocles et al. (1997)</b> "Quantum-Confined Stark Effect in Single CdSe Nanocrystallite Quantum Dots." Science, 278-2114-2117.	-
ADD	22	<b>Greenham et al. (1997)</b> "Charge separation and transport in conjugated polymer cadmium selenide nanocrystal composites studied by photoluminescence quenching and photoconductivity." Synthetic Metals 84:545-546.	-
ADD	23	<b>Guha et al. (1997)</b> "Hybrid organic-inorganic semiconductor-based light-emitting diodes." J. Appl. Phys. 82(8):4126-4128.	-
ADD	24	<b>Hines et al. (1996)</b> "Synthesis and Characterization of Strongly Luminescing ZnS-Capped CdSe Nanocrystals." J. Phys. Chem. 100:468-471.	-
ADD	25	<b>Hu et al. (2001)</b> "Linearly polarized emission from colloidal semiconductor quantum rods." Science 292:2060-2063.	-
ADD	26	<b>Kortan et al. (1990)</b> "Nucleation and Growth of CdSe on ZnS Quantum Crystallite Seeds and Vice Versa, in Inverse Micelle Media." J. Am. Chem. Soc. 112:1327-1332.	-
ADD	27	<b>Kuno et al. (1997)</b> "The band edge luminescence of surface modified CdSe nanocrystallites: Probing the Luminescing state." J. Chem. Phys. 106(23):9869-9882.	-
ADD	28	<b>Lawless et al. (1995)</b> "Bifunctional Capping of CdS Nanoparticles and Bridging to TiO <sub>2</sub> ." J. Phys. Chem. 99:10329-10335.	-
ADD	29	<b>Lee et al. (2000)</b> "Full color Emission from II-VI Semiconductor Quantum Dot-Polymer composites." Adv. Mater. 12(15):1102-1105.	-
ADD	30	<b>Li et al. (2001)</b> "Band gap variation of size- and shape-controlled colloidal CdSe quantum rods" <u>Nanoletters</u> 1, 349-351.	-
ADD	31	<b>Li et al. (2002)</b> "Semiconductor nanorod liquid crystals" <u>Nano Letters</u> 2: 557-560	-
ADD	32	<b>Matsumoto (1996)</b> "Preparation of Monodisperse CdS Nanocrystals by Size Selective Photocorrosion." J. Phys. Chem. 100(32):13781-13785.	-
ADD	33	<b>Murray et al. (1993)</b> "Synthesis and Characterization of Nearly Monodisperse CdE (E = S, Se, Te) Semiconductor Nanocrystallites" J. Am. Chem. Soc. 115, 8706	-

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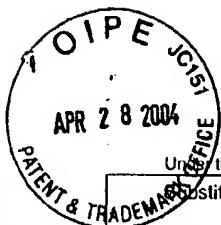
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	Examiner Name	<b>Unassigned Diamond</b>
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ADD	34	<b>Nirmal et al. (1996)</b> "Fluorescence Intermittency in single Cadmium Selenide Nanocrystals." Nature, 383-802-804.	—
ADD	35	<b>Scher et al. (2003)</b> "Shape Control and Applications of Nanocrystals." Philosophical Transactions of the Royal Society London, Series A. 361:241-257	—
ADD	36	<b>Schlamp et al. (1997)</b> "Improved efficiencies in light emitting diodes made with CdSe(CdS) core/shell type nanocrystals and a semiconducting polymer." Journal of Applied Physics 82:5837-5842.	—

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Date Submitted		April 22, 2004		

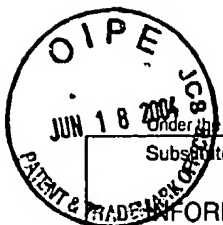
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ADD	01	WO	03/054953	A1	The Regents of the University of California	07-03-2003	—	—

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ADD	1	5,571,612		Motohiro et al.	11-06-1996	—
ADD	2	2002/0040728		Yoshikawa	04-11-2002	—
ADD	3	2002/0192441		Kalkan et al.	12-19-2002	—

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ADD	5	WO	97/00887	A1	Hodes	01-06-1994	—	—
ADD	6	EP	1087446	A2	Den et al.	03-28-2001	—	—

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